

## POWER SECTION

**Model No: AT475785.0 WF**

Revised: 9/22/2020

Rotor Specifications	
	inches
Overall Length	186.00
Contour Length	180.00
Major Diameter	3.041
Eccentricity	0.169
Head diameter	2.750
Thread Form	2.375 HEF Modified
Weight	316 lbs
Material	17-4 PH <sup>1</sup>

Stator Specifications	
	inches
Overall Length	198.00
Tube OD	4.75
Tube ID	3.88
Rubber Cutback Top/End	8.00 / 8.00
Weight	381 lbs
Number of Stages	5.0
Tube Material	4140/4142 Alloy Steel
Rubber Options	NBR-HPW & NBR-HPO

NBR-HPW (in)		Fits (+ Compression / - Loose)				
Size	Minor <sup>2</sup>	75 °F	125 °F	175 °F	250 °F	300 °F <sup>3</sup>
.5 US	2.685	0.018	0.031	0.045	0.065	0.078
STD	2.700	0.003	0.016	0.029	0.049	0.062
.5 OS	2.710	-0.007	0.006	0.019	0.039	0.052
1.0 OS	2.720	-0.017	-0.004	0.009	0.028	0.041
1.5 OS	2.730	-0.027	-0.014	-0.001	0.018	0.031
2.0 OS						
2.5 OS						

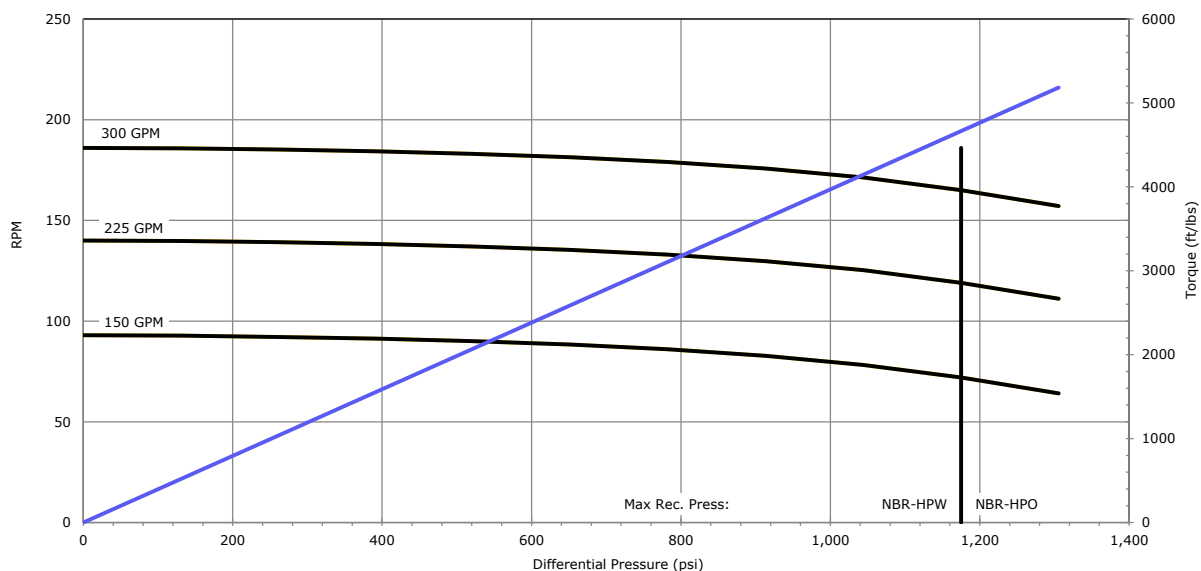
NBR-HPO (in)		Fits (+ Compression / - Loose)				
Size	Minor <sup>2</sup>	75 °F	125 °F	175 °F	250 °F	300 °F <sup>3</sup>
.5 US	2.685	0.018	0.031	0.045	0.065	0.078
STD	2.700	0.003	0.016	0.029	0.049	0.062
.5 OS	2.710	-0.007	0.006	0.019	0.039	0.052
1.0 OS	2.720	-0.017	-0.004	0.009	0.028	0.041
1.5 OS	2.730	-0.027	-0.014	-0.001	0.018	0.031
2.0 OS						
2.5 OS						

Performance Specifications	
Flow Range (gpm)	150 - 300
Speed Range (rpm)	90 - 190
Torque Slope (ft-lb/psi)	3.97
Rotation (rev/gal)	0.620
Off Bottom Pressure (psi)	80

Performance Details		NBR-HPW	NBR-HPO
Max Diff Press (psi)		1180	1180
Stall Diff Press (psi)		1860	1860
Max Torque (ft-lb)		4670	4670
Stall Torque (ft-lb)		7350	7350

■ (NBR-HPW/HPO)

■ Torque



<sup>1</sup> Coating options of chrome or tungsten carbide are available <sup>2</sup> Vector Gauge Readings at Room Temp 75°F <sup>3</sup> BHCT Exceeding 320°F will void warranty for NBR-HPW/HPO.

Performance curves are based on new rotor and stator dimensions and for reference only. Actual performance may vary depending on fit and drilling conditions. The stall torque may exceed that specified for the connected components. Operating over the recommended limits may result in damage to the power section and connected components. Please visit [www.AbacoDrilling.com](http://www.AbacoDrilling.com) for the latest specification revisions.

### LOCATIONS

US: Headquarters 713 Northpark Central Dr., #400 Houston, TX 77073 - Tel: (281) 869-0700 - Fax: (281) 869-0701  
 US: Sales & Distribution 11308 West Interstate 20 East, Odessa, TX 79765 - Tel: (432) 248-1814  
 CANADA: Stator Manufacturing 6303-39th Street Leduc, Alberta T9E 0Z3 Canada - Tel: (780) 986-8947 - Fax: (780) 986-8842  
 DUBAI UAE: Stator Manufacturing Oilfields Supply Center B#57, Jebel Ali, Dubai UAE, P.O. Box 19909 - Tel: 971-4-870-8600

## POWER SECTION - METRIC

**Model No: AT475785.0 WF**

Revised: 9/22/2020

Rotor Specifications	
	mm
Overall Length	4724.4
Contour Length	4572.0
Major Diameter	77.24
Eccentricity	4.29
Head diameter	69.85
Thread Form	2.375 HEF Modified
Weight	143 kg
Material	17-4 PH <sup>1</sup>

Stator Specifications	
	mm
Overall Length	5029.2
Tube OD	120.7
Tube ID	98.4
Rubber Cutback Top/End	203.0 / 203.0
Weight	173 kg
Number of Stages	5.0
Tube Material	4140/4142 Seamless Alloy Steel
Rubber Options	NBR-HPW & NBR-HPO

NBR-HPW (mm)		Fits (+ Compression / - Loose)				
Size	Minor <sup>2</sup>	25 °C	75 °C	100 °C	125 °C	150 °C <sup>3</sup>
.5 US	68.20	0.46	1.07	1.38	1.68	1.99
STD	68.58	0.08	0.68	0.98	1.28	1.59
.5 OS	68.83	-0.18	0.42	0.72	1.02	1.32
1.0 OS	69.09	-0.43	0.16	0.46	0.76	1.05
1.5 OS	69.34	-0.69	-0.10	0.20	0.49	0.79
2.0 OS						
2.5 OS						

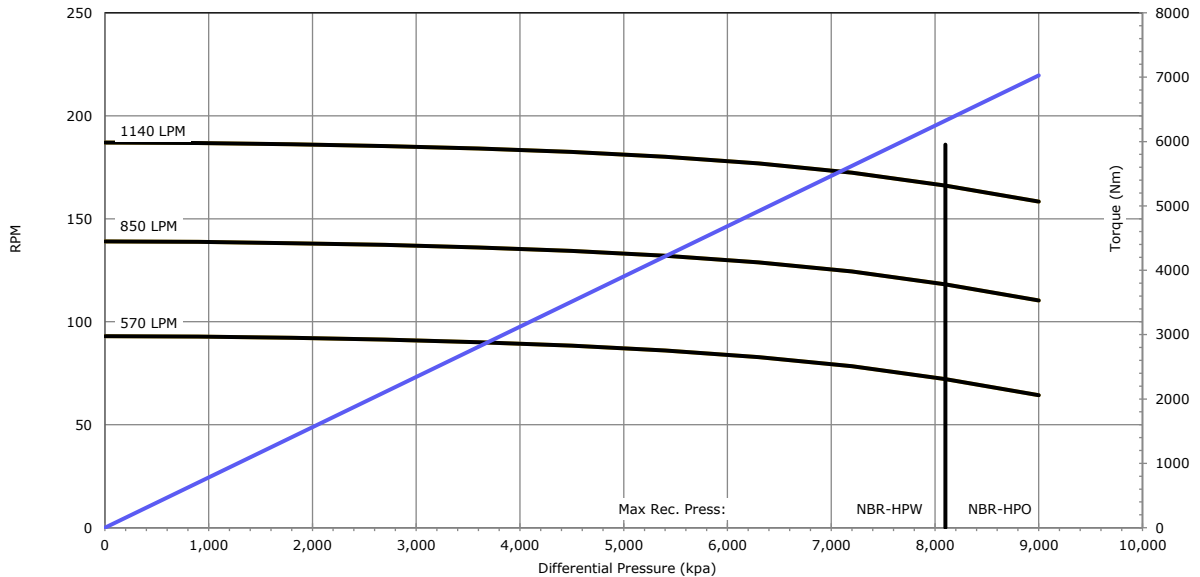
NBR-HPO (mm)		Fits (+ Compression / - Loose)				
Size	Minor <sup>2</sup>	25 °C	75 °C	100 °C	125 °C	150 °C <sup>3</sup>
.5 US	68.20	0.46	1.07	1.38	1.68	1.99
STD	68.58	0.08	0.68	0.98	1.28	1.59
.5 OS	68.83	-0.18	0.42	0.72	1.02	1.32
1.0 OS	69.09	-0.43	0.16	0.46	0.76	1.05
1.5 OS	69.34	-0.69	-0.10	0.20	0.49	0.79
2.0 OS						
2.5 OS						

Performance Specifications	
Flow Range (lpm)	570 - 1140
Speed Range (rpm)	90 - 190
Torque Slope (Nm/kpa)	0.78
Rotation (rev/Liter)	0.1638
Off Bottom Pressure (kpa)	520

Performance Details		
	NBR-HPW	NBR-HPO
Max Diff Press (kpa)	8200	8200
Stall Diff Press (kpa)	12800	12800
Max Torque (Nm)	6400	6400
Stall Torque (Nm)	10000	10000

■ (NBR-HPW/HPO)

■ Torque



<sup>1</sup> Coating options of chrome or tungsten carbide are available <sup>2</sup> Vector Gauge Readings at Room Temp 25°C <sup>3</sup> BHCT Exceeding 160°C will void warranty for NBR-HPW/HPO.

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